i-Hub newsletter

August 2020

The Innovation Hub for Affordable Heating and Cooling celebrates a successful 12 months

The i-Hub steering committee Industry Nominee Group (ING) has met and reviewed the annual evaluation report, which has now been accepted by ARENA.

Key recommendations of the report included:		
The quality of technical reporting being produced by i-Hub sub-projects is generally high	Sub-project teams have produced a considerable amount of work in a relatively short time	All sub-projects have met their Milestone 3 targets and deliverables
All sub-projects are currently on track to meet their Milestone 4 targets and deliverables	New sub-projects are being proposed to i-Hub and evaluated by the steering committee	There are no known reasons why the i-Hub project should not progress to its next stage

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New projects approved

During the ING meeting, the group also reviewed several new proposals. The green light has been given to four new projects, including additional Integrated Design Studios in the schools, emergency response and aquatic sectors, and a new Data Clearing House activity stream project involving an innovative approach to air conditioner control and demand response for retirement living precincts. More information to come soon.

The HVAC Demand Response Atlas Visualisation tool

The HVAC Demand Response Atlas Visualisation tool has been developed as part of the i-Hub DCH (Data Clearing House) Project. The tool allows users to explore estimates of residential and commercial building air conditioning wholesale demand response by electricity network region or individual electricity zone substation across most of Australia.

Users can select the month, time of day and temperature range of interest, and then view either the estimated magnitude of air conditioning demand response, the demand response proportion of the total electricity demand, or an estimate of the regional wholesale value of the demand response.

This information may be used to help understand the current potential of air conditioning wholesale demand response in buildings, for example to assist high-level planning of HVAC demand response initiatives.

Access the tool

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i-Hub Summit I – webinar series

In June and July, the Innovation Hub for Affordable Heating and Cooling (i-Hub) hosted three free online knowledge-sharing webinars that brought together leading universities, researchers, consultants, building owners and equipment manufacturers in a connected research and development community.

These sessions provided an update on the current i-Hub projects, their progress, and key findings to date. They also included Q&As with activity leaders.

If you missed the complimentary interactive sessions, click here to access the recordings.

The latest from the Knowledge Hub

The Knowledge Hub is a central location where all reports submitted by the i-Hub sub-projects can be found. The reports are also available to download free from the individual sub-project pages.

VISIT THE KNOWLEDGE HUB

i-Hub Summit II – November 2020 in Sydney

After our first successful knowledge summit, the second iteration is scheduled for November in Sydney. This will be an opportunity to meet face-to-face with i-Hub activity leaders and industry representatives to explore more on the outputs of the projects and how you can be involved.

Full details of the i-Hub Summit II – including speakers and presentation details – will be available on the i-Hub website shortly.

Meet the i-Hub leaders

Integrated Design Studios

Brendon McNiven
Enterprise Professor
Melbourne School of Design, University of Melbourne

What is your role within the university?
My main role is to help oversee the Master of Architectural Engineering. As an Enterprise Professor, I focus on industry engagement. I inevitably get involved in research projects like i-Hub, and in teaching and the curation of the student experience.

Why did you get involved in the i-Hub?
I come from 30 years in industry, leading multidisciplinary engineering teams on architectural building projects. I am a passionate believer in what integrated design (architecture and engineering) has to offer in improving our built environment and in helping to combat climate change. i-Hub offered a forum where we could explore and advance this cause.

What do you expect or what are you getting out of i-Hub, and how it can be used in the future?
We are learning a lot about the practicalities of implementing integrated design on projects. There is a lot of literature out there on the theory, but not much examination of how it works in practice in design office scenarios. At the end of the process, we will document what we learn and pass this onto others to assist them in implementing integrated design on their own projects.

At the same time, we are exploring lots of ideas for incorporating renewable energy technologies into different building typologies such as schools, data centres, aquatic centres, etc. We will also share these findings with industry.

Living Laboratories

Georgios Kokogiannakis, M.AIRAH
Associate Professor
Sustainable Buildings Research Centre (SBRC), University of Wollongong

What is your role within the university?
I have teaching and research duties as an Associate Professor, with the most significant component – about 60 to 70 per cent – of my time devoted to industry-based research projects at the SBRC. I teach subjects in areas of building physics and building services, and aim to develop my classes by using findings from various industry-based projects, and our previous involvement with the Solar Decathlon competitions. I also supervise postgraduate research students working in relevant research areas.

Why did you get involved in the i-Hub?
i-Hub combines a very strong team of partners, and provides a rare opportunity to demonstrate and quantify the impact HVAC technologies can have on mitigating the consequences from peak heating/cooling loads when combined with well-utilised renewable energy systems.

i-Hub provides a unique platform to undertake large demonstration projects that aim to answer important questions about the optimum operation of HVAC and renewable energy systems, and will provide rich datasets that are very valuable to a lot of people, including those with research-oriented interests like myself. Getting involved in the i-Hub was a great opportunity for me.

What do you expect or what are you are getting out of i-Hub, and how it can be used in the future?
In the case of Living Labs, stakeholders from the education and healthcare/aged care sectors will be able to use the findings from the project and obtain useful lessons-learnt experiences. A legacy of Living Laboratories is established across the two sectors, providing a platform to monitor and validate technologies in front of major building portfolio owners.

It could also become a market-entry opportunity for technology providers who would like to see their products being used in these two sectors. The in-situ testing infrastructure will remain available to our existing partners even after the completion of the project, and I am hoping that we – being one of the university partners in the project – will be able to continue forming strong partnerships with technology providers and building portfolio owners, even after the formal end date of the project. Any opportunity enabling innovation to improve the value of renewable energy while maintaining optimum indoor conditions in buildings is fascinating. i-Hub provides the means to explore such opportunities, and I hope we will be able to report on those during the Living Laboratories project period and beyond.

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i-Hub is open for applications

i-Hub is open to applications from industry participants who have suitable demonstration projects that require co-funding.

This project has received funding from ARENA as part of ARENA's Advancing Renewables Project. For more information, visit this page.

Stay connected with the Innovation Hub

This project receives funding from ARENA as part of ARENA's Advancing Renewable's Program. The views expressed herein are not necessarily the views of the Australian Government and the Australian Government does not accept responsibility for any information or advice contained herein.

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